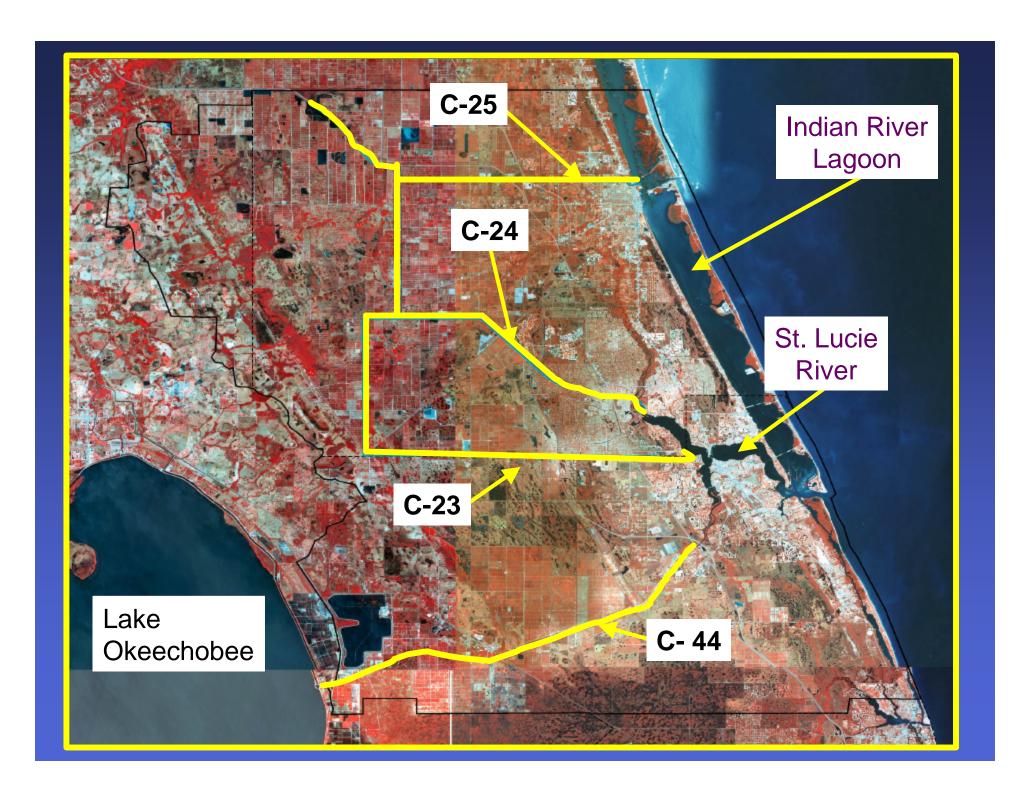
Upper East Coast Water Supply Plan

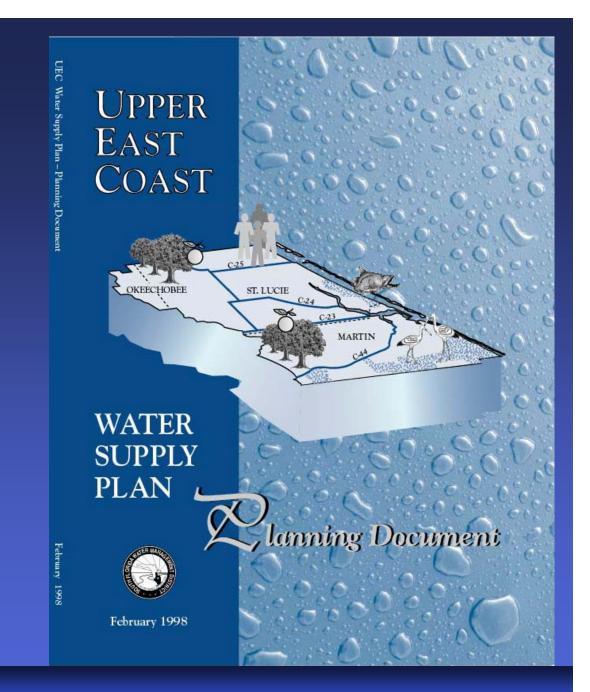
Sharon Fowler, AICP Water Supply Planning Department





Features of the UEC Planning Area

- 1200 square miles
- Planning horizon2020
- Population projected to increase by 80% to 455,000
- Agricultural water use consumes 85% of regional total
- 22% increase in overall demands to 660 MGD

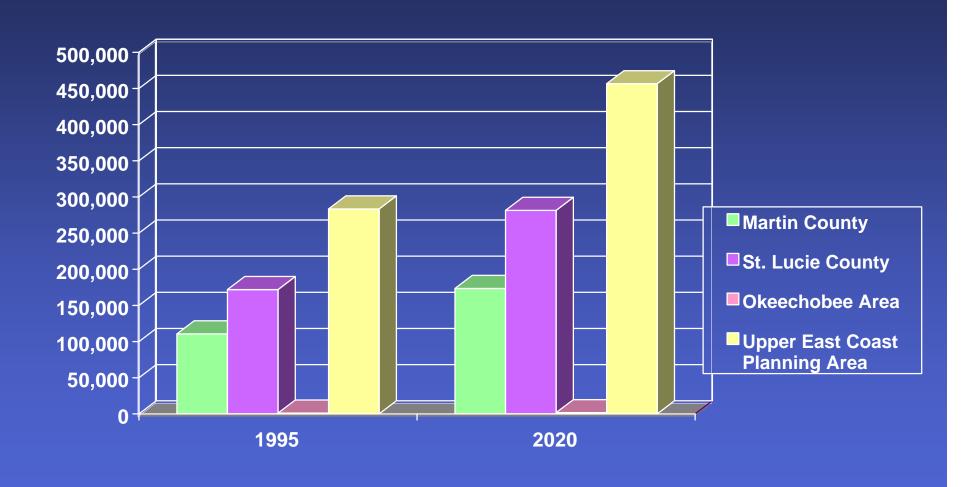


The UECWSP process has five major components

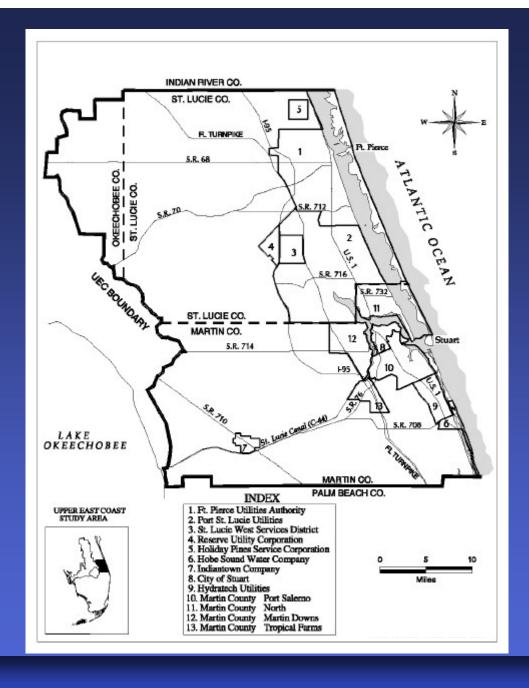
- 1. Water use assessment
- 2. Modeling and Results
- 3. Issue Identification
- 4. Water Supply Development
- 5. Recommendation

Water use assessment

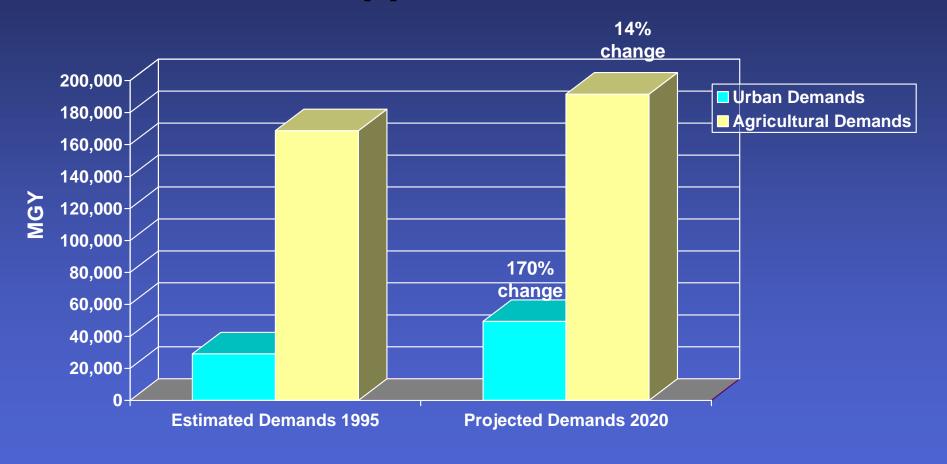
The population in the Upper East Coast is projected to increase by 80 percent over the next 20 years



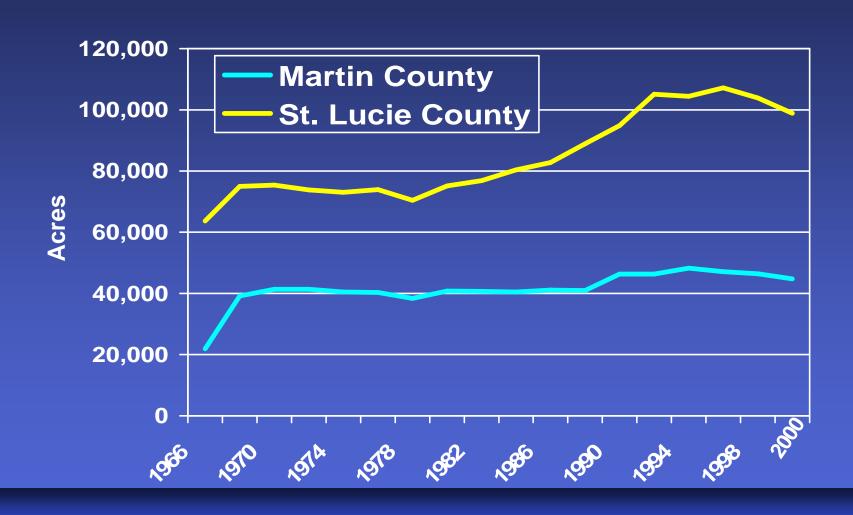
There are several public water supply utilities in the Upper East Coast



While agriculture is the largest user, urban water use has the highest percent increase in the Upper East Coast



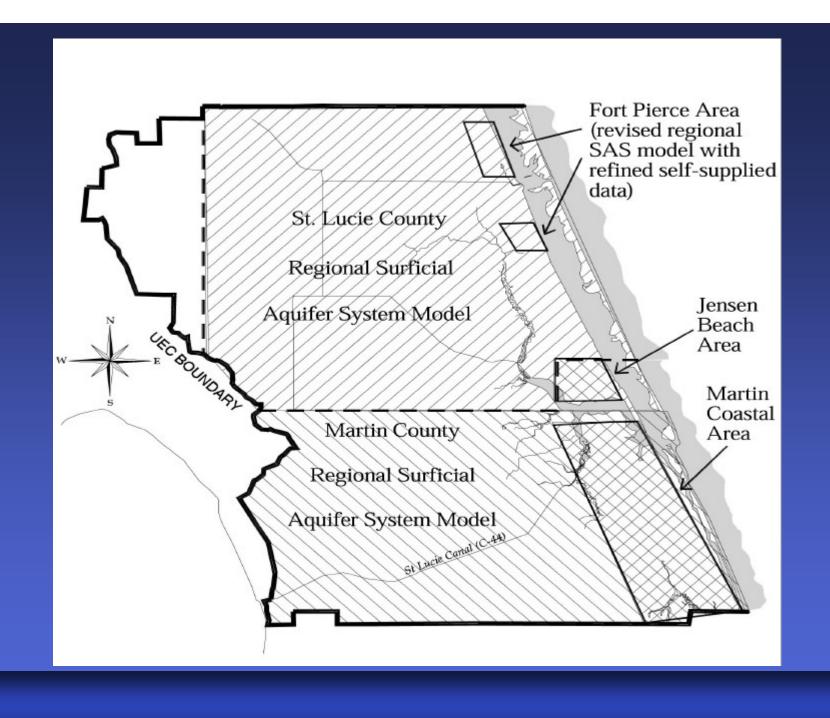
Citrus is the most significant crop in the Upper East Coast, but has been recently declining



Modeling and Results

Several models were used in the UECWSP

- Three regional models were used as screening tools to identify potential problem areas
- Three sub-regional models were used to further refine the extent of potential problem areas



Issue Identification

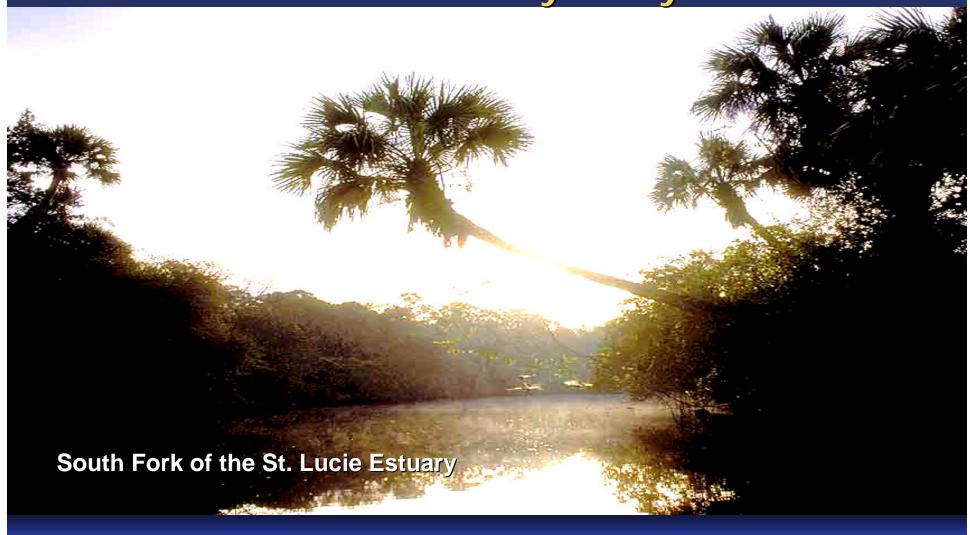
Several issues were identified in the UEC Planning Area

- Limited expansion of surficial aquifer
 - Wetland impacts
 - Saltwater intrusion
- Floridan aquifer water quality
- Surface water availability
- Freshwater discharges to estuaries

Up to 1,100 acres of wetlands could potentially be impacted with continued surficial aquifer use

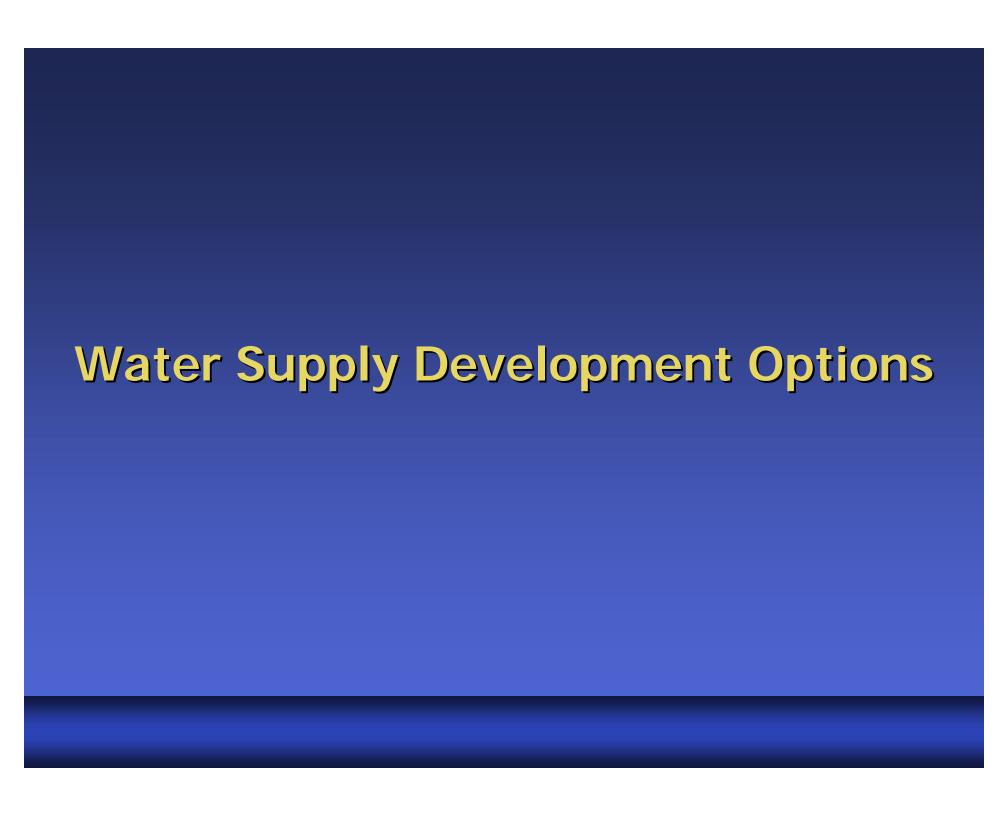


Freshwater discharges to the St Lucie Estuary and Indian River Lagoon are addressed in the IRL Feasibility Study



Surface water availability is an agricultural issue that is addressed in the IRL Feasibility Study



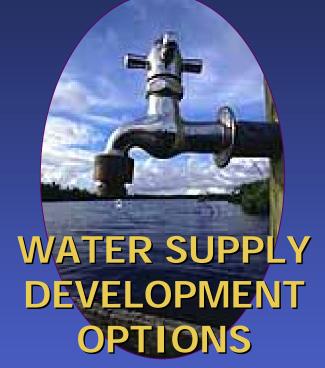


Conservation

Wastewater Reuse

New Wellfields

Utility Interconnects



Aquifer
Storage
& Recovery

Surface Water Reservoirs

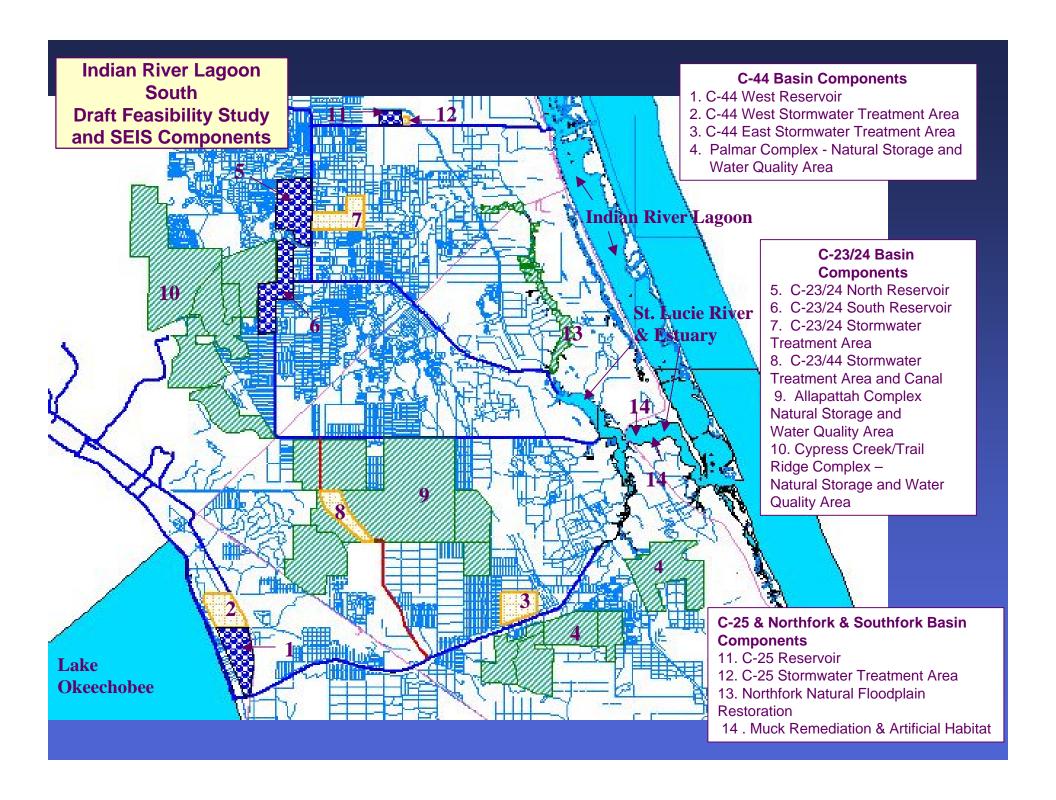
Floridan
Aquifer System

Ocean Water

Surface Water Reservoirs:

Indian River Lagoon Feasibility Study

(for environmental impacts to estuary and agricultural water supply)



Draft Implementation Schedule for IRL-S

Indian River Lagoon - South	15-Jun-02	23-Dec-10
PMP Development	9-Oct-01	31-Jul-02
C-44 Basin Components	15-June-02	30-Sep-08
C-23/24 Basin Components	15-Jun-02	22-Sep-09
C-25 Basin Components	1-Jul-04	22-Dec-10
Natural Area Components	15-Jun-02	21-Dec-10
Muck Removal	1-Jul-05	23-Dec-10
Northfork Floodplain	1-Oct-03	25-Mar-08

Recommendations

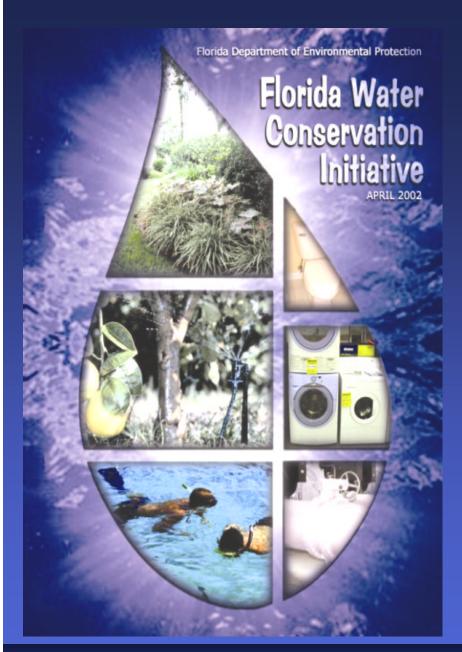
(for urban coastal area)

There are several recommendations in the UECWSP that encourage alternative sources to the SAS

- Conservation
- Wastewater reuse
- Floridan aquifer
- Alternative water supply funding program

Conservation

- **Florida Water Conservation Initiative**
- SFWMD Comprehensive Water Conservation Program



6 Work Groups

- Agricultural irrigation
- Landscape irrigation
- Water pricing
- Industrial/commercial/ institutional use
- Indoor use & water features
- reuse of reclaimed water

Long-term focus on increasing water use efficiency

51 Recommendations

SFWMD Comprehensive Water Conservation Program

- Rule revisions (Water Conservation & Water Shortage)
- Water Conservation Grant Program
- Alternative Water Supply Grant Program
- Mobile irrigation labs
- Recognition Program

Urban Mobile Irrigation Laboratory

A typical urban MIL performs 140 evaluations per year, saving 50-60 million gallons per year

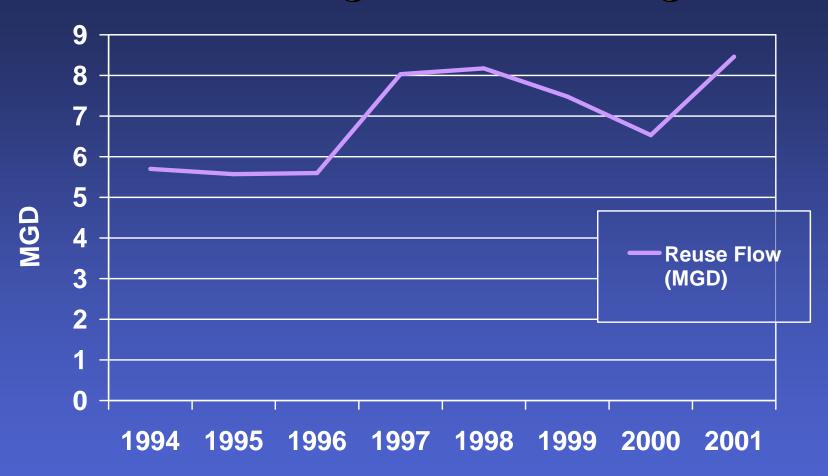


Alternative Water Supply Funding projects create additional water

Fiscal Year	Project Type	SFWMD Funding*	Additional Water (mgd)
FY03 Projects	Reclaimed water use Reverse osmosis disposal	450,000	1.25
FY02 Projects	2 Floridan aquifer/reverse osmosis 1 Reclaimed water use	682,800	2.17
FY01 Projects - None			
FY00 Projects	3 Floridan aquifer/reverse osmosis 1 Reclaimed water use 1 Storm water reuse	927,000	9.66
FY99 Projects	2 Floridan aquifer/reverse osmosis 2 Reclaimed water use 1 Storm water reuse 1 Collector well	920,000	10.90
Total		2,979,800	23.98

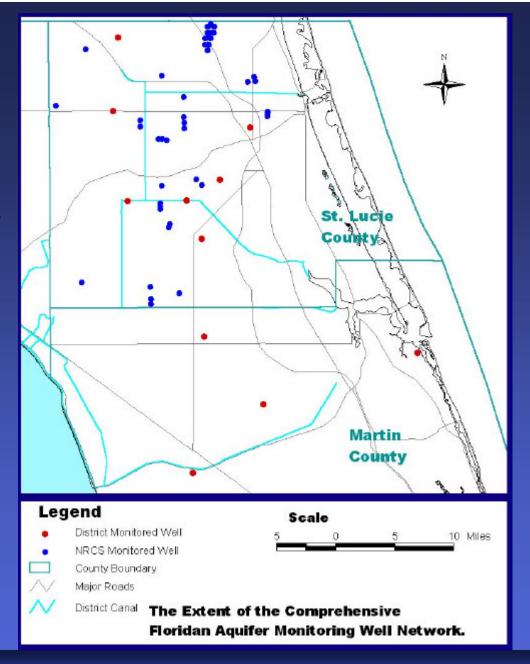
^{*}Total project costs \$34,972,000

The trend for wastewater reuse is increasing in the UEC region



The Floridan aquifer monitoring well network collects data to evaluate relationships between water quality, water use, and water levels

There are 11 SFWMD sites and 21 NRCS sites in the monitoring network



Use of the Floridan aquifer has increased 16 percent. This trend is anticipated to continue.

	1998	1999	2000
Floridan aquifer	5.09	6.57	8.48
Surficial aquifer	27.28	30.52	34.72
Total use	32.37	37.09	43.20

Conclusion

The needs of the region can be met with appropriate management and diversification of water supply sources.

UEC Planning Document

- 1. Introduction
- 2. Water Supply Planning Process
- 3. Planning Area Description
- 4. Analysis
- **5.** Solution Development
- 6. Plan Implementation and Funding

Appendices

- A. Florida Statutes and Administrative Code
- B. Land Use Maps
- C. Rainfall Frequency Analysis
- D. Ground Water Resources
- E. Potable and Wastewater Treatment Facilities
- F. Environmental Resources and Needs
- G. Methodology for Urban and Agricultural Demand Projections

Appendices (cont.)

- H. Water Quality and Protection
- I. Regulation of Wastewater Reuse and Aquifer Storage and Recovery
- J. Analysis/Modeling